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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,890	08/25/2003	Thomas Skoczylas	PES-0024-D	1889

23462 7590 06/30/2004  
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EXAMINER
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MAI, NGOC LAN THI

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

27

<b>Office Action Summary</b>	<b>Application No.</b> 10/604,890	<b>Applicant(s)</b> SKOCZYLAS ET AL.	
	<b>Examiner</b> Ngoclan T. Mai	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 9, 10, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. (US 5,640,669).

Harada et al discloses the claimed method by immersing a metallic porous body comprising electrically conductive materials such as Ni and Cu in a silver potassium cyanide solution to form Ag coating on the metallic porous body. The Ag acts as catalyst. See col. 3, line 32 to col. 6, line 39.

3. Claims 1, 3, 4, 9, 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindstrom.

Lindstrom disclose the claimed method in co. 6, line 3 to col. 8, line 10.

4. Claims 1-2, 4, 9-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wallin.

Wallin discloses a method for making porous composite electrode comprising forming a layer applying a mixture of ionically-conductive and electronically conductive particle onto a layer of an electrolyte material, sintering the mixture to form an

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interpenetrating network and infiltrating the network with a solution of an electrocatalyst precursor and heating the infiltrated network under conditions sufficient to form the corresponding electrocatalyst. Col. 3, lines 20-38. Wallin teaches that the porosity of the composite electrode structure is preferably at least about 20% and no more than 50% and that the average pore size of the composite structure is at least 1 micron and preferably no more than 10 microns. See col. 6, lines 53-61.

5. Claim 1, 3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Helliker et al.

Helliker et al disclose a process for fabricating porous nickel structure useful as an inert body in the fabricating of electrodes comprising sintering a gel mixture containing nickel powder to obtain bodies having porosities above 90 percent. See col. 2, lines 51-65. Helliker et al also teach the body can be used to hold catalytic material such as platinum.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1, 3-6, 8-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brennecke et al. in view of Norling et al.

Brennecke et al disclose methods for making highly porous electrodes of claims 1, 3 and 4 in col. 1, lines 64-68; claims 5, 6 and 8 in col. 1, lines 45-60; and claims 9-10, 12, and 13 in col. 1, lines 61-63.

The difference between the claims and Brennecke et al is that Brennecke et al. do not specify the porosity of the electrodes.

Norling et al, which disclose a method of manufacturing highly porous electrode, teach it is desirable to utilize electrode bodies having the maximum pore volume to maximize the storage of active material in the electrode body. Col. 1, lines 30-35. Norling et al teach employing pore forming agent in combination with nickel powder to form highly porous electrode which is defined as having porosity of about 90 to 95% by volume. See col. 2, lines 16-35.

Since the electrode taught by Brennecke et al is also highly porous, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the electrode taught by Brennecke et al be made to have porosity as taught by Norling et al to maximize the storage of active material in the electrode.


8. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoctan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 7:30-4:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ngoctan T. Mai  
Primary Examiner  
Art Unit 1742

n.m.